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In the Specification:

Please substitute the following paragraph for the paragraph starting on line 13 of page 12 of the instant specification:

It may be desirable to have an effective amount of hydrogen present in the heating, or growth, zone during nanostructure growth. Hydrogen serves two complementary functions. For example, on the one hand it acts as a cleaning agent for the catalyst, and on the other hand it hydrogasifies, or causes carbon burn-off, of the carbon structure. By an effective amount, we mean that minimum amount of hydrogen that will maintain a clean catalyst surface (free of carbon residue), but not so much that will cause excessive hydrogasification, or burn-off, of carbon from the nanostructures and/or substrate structure, if present. Generally, the amount of hydrogen present will range from about 5 to 40 vol.%, preferably from about 10 to 30 vol.%, and more preferably from about 15 to 25 vol.%. It is preferred that ratio of CO, when used as the carbon-containing compound, and hydrogen be from about 95:5 to about 5:95; more preferably from about 80:20 to 20:80. For some catalyst systems, such as Cu:Fe, the hydrogasification reaction is relatively slow, thus, an effective amount of hydrogen is needed to clean the catalyst in order to keep it clean of carbon residue and maintain its activity. For other catalyst systems, such as Cu:Ni, where the activity is so high that excessive hydrogasification occurs, even at relatively low levels of hydrogen, little, if any, hydrogen is needed in the heating zone. A Cu:Ni catalyst is so active that it utilizes essentially all of the carbon deposited thereon to grow nanofibers, and thus, there is generally no carbon residue to clean off.

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